

The Citizen Forester

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Developing a Local Tree Ordinance: Part I

By Mollie Freilicher
Community Action Forester

The first in a two-part series, Part I will be a history and overview of tree ordinances. In part II

(February 2016), we'll explore sections of tree ordinances and some local examples from Massachusetts.

In Massachusetts, we are fortunate to have a relatively long history of public shade tree protection. The Acts of 1896, Chapter 190, enumerates the powers of tree wardens and authorizes communities to provide for the election of tree wardens, should communities choose to do so. This early act includes provisions protecting public shade trees, including disallowing the cutting of, removal of, or injury to public shade trees, requiring the posting of trees prior to removal, and other elements that are still in the current law today. By 1899 (Chapter 330, Acts of 1899), the law required towns and cities to have tree wardens, something we still see in our current Shade Tree Law, Chapter 87 of the Mass. General Laws. [For an overview of the history of tree protection in Massachusetts, see *The Centennial Year 1913-2013*, Massachusetts Tree Wardens and Foresters Association].

To be sure, we can be proud of this legacy and proud of having the statewide tree protection that the current law, Chapter 87, Mass. General Laws, affords, but there is an opportunity to go beyond the Shade Tree Law, Chapter 87, to tailor regulations to conditions in communities. We are talking, of course, about adopting local tree ordinances.

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If you are not familiar with Chapter 87, it consists of 14 sections defining public shade trees, the powers of tree wardens, the cutting and removal of public shade trees, penalties, planting, trees on roads managed by the state, affixing signs to trees, and provisions for working with utilities conducting

vegetation management. If you are not familiar with M.G.L. Chapter 87, you can read it online: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIV/Chapter87>.

A local ordinance can help a community achieve its urban forestry goals, whether those are establishing a tree committee, preserving trees during construction projects, protecting significant trees, requiring tree planting in certain situations, or others. It is not uncommon for rules regarding trees to appear in various sections of municipal code. Tree planting for development projects may appear in planning rules or subdivision regulations, and requirements for tree buffers may appear in zoning rules. Sometimes local rules related to trees may be scattered throughout municipal code. Other times, rules may be lacking entirely. Going through the process of developing a local tree ordinance can unify these provisions and ensure that rules related to trees are straightforward and compatible with the goals of the community.

Some communities have policies regarding public shade tree management. These may be in addition to, or in place of, a formal ordinance. A policy states principles and, perhaps, specific processes that a tree warden or tree program carries out. Sometimes policies are formally adopted or are otherwise implemented in a community. Because of this, they are easier to change than an ordinance, but are also harder to enforce and be more susceptible to being challenged. For this reason, we recommend developing a formal tree ordinance for your community.

Like many processes, such as developing a management plan or conducting a tree inventory, the process of creating a local tree ordinance begins with some soul searching and information-gathering. What exactly are the goals of the community? What are the needs? What are the wants? What are the issues that a tree ordinance or

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clarification of existing rules could mitigate? What resources does the community currently have?

In Massachusetts, it is often a tree committee or tree board that starts the process of developing a tree ordinance, but it can also come from the tree warden or other individual. It is a process that takes dedicated individuals to see the project through, as it can take many months to years to complete. The group may include the tree committee, tree warden, representatives from other municipal departments, and community members. Other stakeholders should be involved as well.

Many communities in Massachusetts have tree ordinances, so a community interested in creating their own does not have to start from scratch. Many ordinances are listed on our [website](#), and communities can start there to see what elements may be applicable locally.

Types of Ordinances

There are a few different types of ordinances. These are from the International Society of Arboriculture, in their [Guidelines for Developing and Evaluating Tree Ordinances](#) and the American Forests Tree Protection Toolkit:

- Street tree ordinances primarily cover the planting and removal of trees within public rights-of-way. They often contain provisions governing maintenance or removal of private trees which pose a hazard to the traveling public.
- Tree protection ordinances are primarily directed at providing protection for native trees or trees with historical significance. They usually require that a permit be obtained before protected trees can be removed, encroached upon, or in some cases, pruned.
- View ordinances are designed to help resolve conflicts between property owners that result when trees block views or sunlight. This type of ordinance is often part of a zoning ordinance.
- Landscape Ordinance – These establish required landscaping provisions, such as the placement and number of trees planted, types of suitable plants or trees and more. This type of ordinance may require trees in parking lots or other sites. This type of ordinance is often found in zoning ordinances.

In Massachusetts, there are a variety of tree ordinances.

Some contain tree planting guidelines, pruning guidelines, tree replacement, policies for removal of non-risk trees, and provisions for establishment of shade tree committees or boards. Others contain provisions for protecting healthy private trees during construction or for protecting significant trees on private property.

These existing ordinances offer a great opportunity to see what other communities have adopted, but it is important not to simply replicate another ordinance that may not be appropriate for the specific goals of a community.



Functions of a Local Tree Ordinance:

- Establish goals for urban and community forestry in the municipality
- Establish and define authority over public trees
- Institute performance standards for planting, maintenance (such as pruning), protection, and removal
- Establish a process for managing trees infested by a recognized tree pest
- Define nuisance conditions for trees
- Address enforcement, fees, appeals, and fines.

Stay tuned for Part II, which will cover sections of tree ordinances, including examples from communities in Massachusetts.

Resources

There are a lot of resources to help you through the process of drafting a tree ordinance:

International Society of Arboriculture: Guidelines for Developing and Evaluating Tree Ordinances:

[http://www.isa-](http://www.isa-arbor.com/education/resources/educ)

[ar-](http://www.isa-arbor.com/education/resources/educ)

[bor.com/education/resources/educ](http://www.isa-arbor.com/education/resources/educ) [TreeOrdinanceGuidelines.pdf](http://www.isa-arbor.com/education/resources/educ)

Developing Successful Tree Ordinances, North Carolina State University: <http://content.ces.ncsu.edu/developing-successful-tree-ordinances.pdf>

Pennsylvania Land Trust Association:

<http://conservationtools.org/guides/show/37-Tree-Ordinance>

Species Spotlight—Invasives!

By Mollie Freilicher,
DCR Community
Action Forester

This month, we're picking up our review of invasive species that are on the state Prohibited Plant List. Under authority from Massachusetts General Law, including, but not limited to, Chapter 128 Section 2 and Sections 16 through 31A, the Massachusetts Department of Agricultural Resources (MDAR) derives the authority to ban the importation, propagation, and sale of plants the Commonwealth has deemed noxious weeds. In 2006, MDAR, in collaboration with the Massachusetts Invasive Plant Advisory Group (MIPAG), identified 140 plants to be included on the newly created [Prohibited Plants List](http://www.mass.gov/eea/agencies/agr/farm-prohibited-plants-list). On January 1, 2009, the prohibitions were fully put into effect. The list includes herbaceous and woody and terrestrial and aquatic plants. The ban does not impact plants already in the landscape. It is a poor practice, and unlawful, to plant any of the plants on the list. For native alternatives, check out this list from the New England Wildflower Society: <http://www.newfs.org/docs/docs/invalt2.pdf>.

In this issue, we'll cover tree of heaven and Amur corktree, and we'll cover the remaining trees on the list in future issues. For the full list of prohibited plants, go the website: [http://www.mass.gov/eea/agencies/agr/farm-](http://www.mass.gov/eea/agencies/agr/farm-prohibited-plants-list)

Amur corktree

Native to China and Japan



Form: Medium-sized tree, reaching heights of 45 feet, often with an equal or greater spread and a flat-topped crown.

Leaf: 10 – 15 inches long and opposite and pinnately compound, with seven to eleven leaflets. The leaflets are two to four inches long, entire, ovate with a pointy tip, and with a narrow or rounded base. They are dark green above and paler below.

Flower: Not ornamentally important. Small and yellow and borne in panicles two to three-and-a-half inches long. Amur corktree is dioecious, meaning that male and female flowers occur on separate trees.

Fruit: Developing from female flowers, is a small black drupe that ripens in the fall and can persist on trees through winter. When crushed, the fruit gives off a strong odor.

Twig: Stout and shiny brown or orange-brown, with prominent lenticels. The leaf scar is a distinctive horse-shoe shape, with the bud set in the “U.”

Bark: Dark gray, spongy, and corklike in appearance with ridges and furrows. On younger trees, the corky ridges are not as developed. Despite being called “corktree,” this is not the tree from which cork is collected. That is a Mediterranean species of oak *Quercus subur*.

Where you'll find it: Planted intentionally in the past in parks and arboreta, today it can be found in forest fragments and along roadsides.

Tree of heaven

Native to China



Form: A short to medium-sized tree, 40 to 60 feet tall, with heavy, open branches. Lower branches on larger trees tend to droop. Often grows in clumps.

Leaf: Alternate, pinnately compound, 1 to 3 feet long, with 11 to 41 leaflets, leaflets are 2 to 6 inches long, pointed at the tip with large, glandular teeth near the base, green above and below. In comparison to leaves of sumac and black walnut, leaves of tree of heaven seem a bit irregular due to the glandular teeth. Acrid odor when crushed.

Flower: Species is dioecious (male and female flowers on separate plants); small yellow-green, in long (6 to 12 inches) clusters, males have a disagreeable odor, appearing in late spring to early summer.

Fruit: An oblong, twisted samara, 1 to 1.5 inches long with the seed in the center, hanging in long clusters, ripens in late summer and disperses through the winter.

Twig: Stout, yellow to red-brown, with fine velvety hairs when young, easily broken with a large reddish brown pith; buds are relatively small and half-spherical sitting above large, heart-shaped leaf scars; terminal bud is absent. Strong, acrid odor when broken.

Bark: Thin, pale gray, with lighter vertical streaks.

Where you'll find it: Occasionally as street tree, more likely naturalized along roadside or other marginal, edgy habitat. Spreads quickly.

Gleanings



Goodbye to Fall!

A beautiful sugar maple Rick Harper photographed and shared with us.

Thanks, Rick!

Laying Eyes on a Living American Chestnut Tree in Cape Cod Woods

By Robert Finch

October 27, 2015—A few weeks ago an old acquaintance of mine called up and asked if I'd like to go with her to see "a stand of chestnut trees."

"American chestnuts?" I asked.

"Yes," she replied. "Skeptical?" I was, since, as most of you may know, the American Chestnut, which once composed about a third of the original Eastern hardwood forests, was essentially extirpated by an imported blight in the early 20th century. The eminent naturalist, Donald Culross Peattie, lyrically expressed what was lost in his 1948 elegy for the chestnut: "In the youth of a man not yet old," he wrote, "native chestnut was still to be seen in glorious array...waving with creamy white blossoms in the crowns of the ancient trees, so that it looked like a sea with white combers plowing across its surface." Read or listen to the full story at

www.capeandislands.org.

How Fresh is Your Maple Syrup?

Sugar maple trees can store carbon from the atmosphere for several years in non-structural reserves as a buffer against disturbances such as droughts, hurricane damage, or attacks by insects. A new study shows that trees draw on this reserve when springtime sap begins to flow. Read the full story at ScienceDaily.

Does Your Landscape Work?

By Jared Green

December 3, 2015— "We are designing ever more complex systems, and it's complicated to see if they are performing as they should. You can't just look at a rain garden and say, 'yes, it's working,'" said Eric Kramer, ASLA, a principal with Reed Hilderbrand, at the ASLA 2015 Annual Meeting in Chicago. "With living systems, you have to check in over time." So how can landscape architects check in with their projects to see if they are actually working? The answer may be to use commissioning, a process in which performance standards are established and then measured and verified over time. In the era where landscape architects may be expected to measure every ecosystem service, this approach increasingly makes sense as a way to capture value.

Christian Gabriel, ASLA, design director for landscape architecture, General Services Administration (GSA), said commissioning is different from post-occupancy reviews.

Commissioning is about setting performance standards from the beginning of a project and then designing, implementing, and monitoring the project according to those standards. While commissioning agents do cost extra — typically 0.5 – 1.5 percent of the total project budget — Gabriel says their help can save 8 – 20 percent in annual operating costs.

Read the full story at the ASLA blog, [The Dirt](http://TheDirt).



Clark Art Institute, Williamstown, MA / Curbed

Growing on Trees

2016 Marks 40 Years of Tree City USA

Applications for 2016 recognition are due December 31, 2016. Start planning now!

Is your community considering becoming a Tree City USA in 2016? What better way to observe the 40th anniversary of this national program than by joining the ranks **for the first time or rejoining if your community's Tree City status has lapsed.**

Tree City USA is a national program of the Arbor Day Foundation that recognizes communities for urban forest management.

It is not just for "cities," but for communities of all sizes.



TREE CITY USA

To become a Tree City USA, your community must meet for standards set by the Arbor Day Foundation:

1. **Tree Board or Department:** For many communities in Massachusetts, tree management falls under public works or another department, and this is perfectly acceptable for Tree City USA. On the application, indicate who is in charge of managing trees in your community.
2. **Community Tree Ordinance:** In Massachusetts, we have a statewide ordinance under Mass. General Laws, Chapter 87 that satisfies this standard, if your community does not have an ordinance of its own. We ask for documentation that your community enforces Chapter 87, such as a newspaper clipping for a tree hearing or documentation that your community has adopted this law.
3. **Community Forestry Program with a Budget of at Least \$2.00 per capita:** Many types of spending can be included in the budget to reach \$2.00 per capita including, but not limited to:
 - Salaries•Tree planting (trees, labor, equipment, planting materials, watering, mulching, etc.)•In-house tree maintenance (pruning, insect and disease control, storm response, fertilization, watering, stump removal, equipment, supplies, etc.) • Contracted tree work• Vehicular expenses (fuel, maintenance, depreciation, vehicle purchases, insurance) •Public outreach and staff training (advertising, public education, professional training, professional memberships, Arbor Day event expenses, etc.) •Resource assessment expenses (survey and inventory expenses, software, consultants, etc.) •Tree Board/Volunteer time (\$10/hour) •Grant income •Leaf brush pick-up (up to 20% of cost can be included) •Biomass recycling (up to 20% of cost can be included) •Utilities (up to 20% of utility tree work can be included).
4. **Arbor Day Event and Proclamation:** Tree plantings, seedling distributions, public presentations, school assemblies, festivals, and other activities can be Arbor Day celebrations. The proclamation is a document signed by your mayor or board of selectmen (there are samples on the Arbor Day Foundation website) that declares a

day of your choosing to be Arbor Day in your community.

Benefits of Tree City USA: A community's status as a Tree City USA is considered for applications to the DCR Challenge Grant Program (and may make your community eligible for other grant opportunities such as TD Bank's Green Streets), but the biggest benefit to your community may be in public relations for your city or town. Residents can feel a sense of community pride as they drive past "Tree City USA" signs as they enter the community, and visitors can take notice, too. Annual Arbor Day events also offer an opportunity for publicity highlighting environmental activities, enhancing the public image of the community. Communities may also use Tree City USA as an initial step toward systematic urban tree management. Whatever the reasons, your community will benefit from joining Tree City USA.

The Arbor Day Foundation's [online portal](#) for Tree City USA applications is now available for 2015 applications. We have posted detailed instructions on our website: [2015 Tree City USA Application Instructions and Worksheets](#). Find out more: [What is Tree City USA?](#)

Tree Line USA: Tree Line USA recognizes public and private utilities for practices that "protect and enhance" the urban forest. There are five core standards that companies meet. The goals of Tree Line USA are to promote a safe, reliable electric service and healthy trees in utility service areas. The annual deadline to apply is December 31. More information on the program can be found at: <http://www.arborday.org/programs/treelineusa/summary.cfm>

Tree Campus USA: The Tree Campus USA program recognizes college campuses for management of trees and for student and community involvement. Tree Campus USA has five core standards that schools must meet to be eligible. The annual deadline to apply is December 31. More information on Tree Campus USA can be found at: <http://www.arborday.org/programs/treeCampusUSA/index.cfm>

For questions about the application process or to find out how your community, utility, college, or university can participate, contact Mollie Freilicher, mollie.freilicher@state.ma.us 413-577-2966.

THE CITIZEN FORESTER

Growing on Trees

Grants

DCR Urban and Community Forestry Challenge Grants
Next deadline: November 1 (Full Application)
Challenge grants are 50-50 matching grants (75-25 for environmental justice projects) to municipalities and non-profit groups in Massachusetts communities of all sizes for the purpose of building local capacity for excellent urban and community forestry at the local and regional level.

The USDA Forest Service provides funding for the grant program, and DCR administers the grants with guidance from the **Massachusetts Tree Wardens' and Foresters' Association**. The DCR Urban and Community Forestry Program assists communities and nonprofit groups in their efforts to protect and manage community trees and forest ecosystems, with the ultimate aim of improving the environment and enhancing the livability of all of **Massachusetts's communities**.

For more information on the Challenge Grants, including our Eversource Go Green grants and National Grid Partnership Grants, contact Julie Coop at 617-626-1468 or julie.coop@state.ma.us or Mollie Freilicher at 413-577-2966 or mollie.freilicher@state.ma.us.

Changes to the DCR Urban and Community Forestry Challenge Grant

In 2016, our Urban and Community Forestry Challenge Grant will move to one grant round per year. The annual deadline will be November 1. This move will enable the program to better review and compare grant proposals. Look for some additional changes to the 2016 program in upcoming issues.

New England Chapter-International Society of Arboriculture Arbor Day Grant

The Arbor Day Grant supports small towns and communities build their Arbor Day programs. This grant presents one award in the amount of \$1,000.00 to a town, organization, or community that demonstrates need to promote and support their Arbor Day celebration. Application deadline: March 25, 2016. Get more information and download the application at: http://newenglandisa.org/arbor_day_grant.

2016 Arbor Day Poster Contest

Trees Grow with Us and for Us!

Your school can join us!
All 5th grade students
in Massachusetts are invited
to participate in this annual contest
that combines **art** and **science**.

Each year, over 1,500 Massachusetts fifth graders participate in the Arbor Day Poster Contest. The winners reap rewards including art supplies, ice cream, and a tree for their school. Each year there is a different theme for the posters.

The theme for 2016 is "Trees Grow with Us and for Us."

The deadline for the 2016 contest is April 1, 2016.

[2016 Arbor Day Poster Contest Instructions \(PDF\)](#)

Questions? Contact Mollie Freilicher at 413-577-2966 or mollie.freilicher@state.ma.us or Julie Coop at 617-626-1468 or julie.coop@state.ma.us

Growing on Trees—Webcasts

Urban Forestry Today

Soil, Roots, and the Urban Environment

January 7, 2016 12:00 -1:00 p.m. ET

Taryn Bauerle, Cornell University

According to research, most landscape plant health problems are related to what is taking place below ground. Join Taryn Bauerle, Ph.D., Assistant Professor, Cornell University, as she returns to further detail what we have discovered - and don't yet know - about the occurrences related to tree roots in the urban soil environment.

To join the webinar, go to www.joinwebinar.com and enter the code 130-408-251.

These broadcasts are free, and each one will offer the opportunity for arborists to earn 1.0 ISA CEU and 0.5 MCA credit. Part 1 of this tree protection series, along with earlier webcasts can be viewed at www.urbanforestrytoday.org.

For more information, contact: Rick Harper, Department of Environmental Conservation, University of Massachusetts, Amherst, rharper@eco.umass.edu

The Urban Forestry Today 2015 Webcast Series is sponsored by the University of Massachusetts Department of Environmental Conservation, in cooperation with the USDA Forest Service, Massachusetts Department of Conservation and Recreation, University of Massachusetts Extension,

The National Climate Change and Wildlife Science Center

Visualizing the Impact of Future Climate on Pine Forests

February 2, 2016, 3:00 p.m. ET

Ryan Boyles, University Lead for the Southeast Climate Science Center

To Register, visit: <https://nccwsc.usgs.gov/webinar/PINEMAP>

Urban Forest Connections

The Effect of Urban Tree Canopy on Microclimate and Heat Islands

January 13, 2016 | 1:00-2:15 pm ET

Austin Troy, University of Colorado Denver

Sara Davis, City and County of Denver

Understanding urban tree canopy effects on microclimate can maximize the benefits of trees by influencing the location and species selection of plantings. It can also help urban foresters argue more effectively for program funding and support. In this webinar, we share details of ongoing research in Denver and Baltimore that is increasing our knowledge in this area and helping to inform urban forest planning and management. Learn more at: <http://www.fs.fed.us/research/urban-webinars/>

Future Webinars

February 10, 2016 | 1:00pm-2:15pm ET

March 9, 2016 | 1:00pm-2:15pm ET

i-Tree 2016 Webinars

All instructional sessions begin at 1:00 p.m. (ET)

Next session: January 20, 2016, i-Tree ECO

December 16, 2015 -i-Tree LANDSCAPE (now archived)

January 20, 2016 - **What's New in i-Tree ECO**

February 17, 2016 - Looking at i-Tree HYDRO

March 16, 2016 - i-Tree DESIGN and CANOPY

April 20, 2016 i-Tree STREETS

May 18, 2015 - i-Tree Roundtable: Answering Your Questions about Using i-Tree

June 15, 2015 - Using i-Tree VUE and STORM

July 20, 2015 - Introducing i-Tree Landscape

August 16, 2016 - **What's New in i-Tree ECO**

September 20, 2016 - Looking at i-Tree HYDRO

October, 19, 2016 - DESIGN and CANOPY

November 16, 2016 i-Tree STREETS

December 21, 2016 - i-Tree Roundtable: Answering Your Questions about Using i-Tree

Please visit <http://www.unri.org/itreeworkshops/> to learn more, and to find the log-in details.

Growing on Trees—i-Tree Landscape (beta)

i-Tree Landscape is one of the cornerstones of the exciting updates and features included in the i-Tree 2016 Suite. Landscape builds on the success of tools like i-Tree Design and i-Tree Canopy by serving up sophisticated Forest Service science in an accessible web-based platform. i-Tree Landscape is preloaded with land cover data and U.S. Census demographics. Therefore, a user simply needs to select their areas of interest to begin exploring and creating engaging maps and graphs that capture how people and trees interact. Select the Get Started button to work with the Landscape application or continue reading to learn more about i-Tree Landscape.

Ecosystem Service Estimates

Based on tree and impervious cover data, along with other local data, Landscape provides first-order ecosystem service estimates and values for:

- Carbon storage and annual sequestration
- Air pollution removal with values influenced by the number of people impacted
- Hydrologic effects including evaporation, transpiration, precipitation interception, and avoided runoff.

Prioritization

Different communities have different priorities, and i-Tree Landscape can create tree planting priority maps that consider the current distributions of trees, people, and available space.



The following priorities can be weighted and combined to best meet community needs:

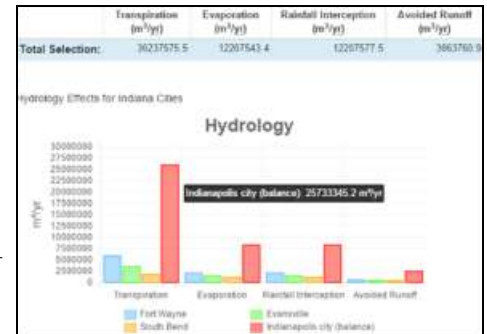
- Tree cover per capita
- Tree stocking, or the amount of available plantable space
- Population density
- Population density of minorities
- Percent of population living below the poverty line.

How Can Landscape Help Me?

There are many creative ways that Landscape can help you. Landscape will make it easier than ever to introduce new audiences, decision makers, or elected officials to the benefits and values that trees provide your community. Some key questions i-Tree Landscape can help you answer:

See how your tree canopy impacts people - i-Tree Landscape will create maps to help you understand where the trees are, where the people are, and how the two interact.

Plant trees where they can do the most good - i-Tree Landscape's top-down approach integrates land cover with demographic data and allows you to map areas in greatest need of increased canopy using priorities that you determine.



Gain more support for managing land use change and maintaining tree cover - i-Tree Landscape will put a dollar value on the services that your urban forest is supplying, providing assessments of what is lost when canopy cover is reduced.

Empower allies to engage new audiences - Having a powerful but easy-to-use tool with compelling visual outputs can build capacity. Now, with i-Tree Landscape, all types of allies can help build support for the important work of managing our urban forests.

Assess the trees beyond parks and streets - The majority of our urban forest canopy, as much as 85%, is on private property; over residential lawns, on commercial properties, or corporate campuses. i-Tree Landscape **assesses the whole urban forest allowing for real “all lands” planning that doesn’t stop at the sidewalk.**

Easily demonstrate the importance of tree canopy for traditional and new audiences - With i-Tree Landscape you can share outputs that speak to conditions where people live and work. i-Tree Landscape is user-friendly, so you can share the tool and allow key audiences to begin to explore their urban forest for themselves.

Learn more at:

<http://www.itreetools.org/landscape/index.php>

Growing on Trees—Upcoming Conferences



From the Mass. Tree Wardens' and Foresters' Association 103rd Annual Conference

January 12-13, 2016, Sturbridge, MA

Keynote speaker: Lynda V. Mapes, "Witness Tree: My year with a single, 100-year old oak"

An author and environmental reporter at *The Seattle Times*, Lynda is also a writer in residence at the Harvard Forest where she was a Bullard Fellow in 2014-15.

See the full schedule and register at <http://masstreewardens.org/annual-conference/>

2016 UMass Community Tree Conference: Work Safe, Stay Safe

Tuesday, March 8, 2016 - 8:00 a.m. to 4:00 p.m., Stockbridge Hall, UMass Amherst

This one-day conference is designed for tree care professionals, volunteers, and enthusiasts, including arborists, tree wardens/municipal tree care specialists, foresters, landscape architects, and shade tree committee members.

The theme of this year's conference is safe work practices. Topics include: OSHA and the Tree Care Industry, Climbing Tips for Long-term Physical Health & Safety, and PPE, Deer Ticks and Their Management in the Landscape. Registration: The registration rate is \$65 for a single individual, \$50 for each additional registration from the same company. For more information and to register, go to: <https://ag.umass.edu/events/2016-community-tree-conference-work-safe-stay-safe>

Sponsored by UMass Extension in cooperation with the UMass Dept. of Environmental Conservation, the Massachusetts Department of Conservation and Recreation and the USDA Forest Service Urban Natural Resources Institute.



22nd Annual Ecological Landscape Alliance Conference & Eco-Marketplace: Sustaining the Living Landscape

March 9 & 10, 2016, UMass Campus Center, Amherst, MA

Our 2016 Annual Conference brings together well-known experts for a lively exchange of information and experiences and exhibitors showcasing the newest ecological products and services at the Eco-Marketplace. On Wednesday, choose from two daylong Focus Sessions: An in-depth look at protecting and building soils and how to incorporate permaculture principles into the conventional landscape. Thursday's topics include restoring the urban forest, the best use of native cultivars, designing with plant communities, and the latest in energy efficient technology to light up your landscape. Join us as we look at strategies to create and maintain

Scholarships

Mass. Tree Wardens and Foresters' Association

The scholarship grants range from \$500 to \$1500 per student. An applicant must be either a student at the University of Massachusetts or a Massachusetts resident studying at an out-of-state college or university. The student must have completed at least one college semester at the time of the award presentation at an accredited college or university in the field of Arboriculture, Community Forest Management, or Urban Forestry. Applications are due by January 15. For more information go to: <http://masstreewardens.org/scholarships/>.

New England Chapter International Society of Arboriculture

Undergraduates and graduate students are invited to apply. Two \$1,500 scholarships for students studying Arboriculture, Botany, Entomology, Horticulture, Plant Pathology, Urban Forestry, or a related field. Applications due April 1, 2016. For complete instructions and eligibility, go to: http://newenglandisa.org/student_opportunities.html.

Mass. Arborists Association \$2,500 Gordon & Frances King Scholarship for UMass and Stockbridge School students, due June 1. For more details, go to: <http://www.massarbor.org/sections/scholarship.php>

Gleanings

Something Wild: Tree Coring

By Dave Anderson & Chris Martin

September 11, 2015—How do you determine the age of a tree? Just count the rings, of course! One ring equals one year of growth. **If you've ever stumbled upon a tree stump you may have even done it yourself. But if you're counting rings on a stump, the life of that tree is over.** So how do you count those rings while the tree is alive? **Experts use a special tool called an "increment borer".**

An increment borer is a tool used to extract a small core from a tree, allowing a dendrochronologist to count its rings without having to cut it down. This T-shaped device has been used for centuries. The cross of the T is the handle, which is connected to a long, hollow tube that has a drill on the end. Line up the drill with the trunk of the tree and start twisting like a screw-driver. The core is captured in that hollow tube, resulting in a long straw of wood to be examined.

While its design is simple, an increment borer requires precision in order to get a good core sample. On the inside of a tree there are a whole series of concentric circles, but they are not perfectly circular and that makes it a challenge to hit the dead center of the tree, which is called the pith.

This method is clearly less invasive than cutting down a tree, but it still leaves a hole in the trunk. The tree is able to heal and seal off the hole from the elements, but **it's not necessarily doing the tree any good.** [One has to be very careful when using an increment borer so as not to disrupt the integrity of the tree.](#)

Something Wild's Dave Anderson joined Wyatt Oswald, a dendrochronologist from Emerson College, on a trip to extract a core sample from an old red maple in New-



bury. The core Oswald pulled was about 22 inches long! He then took the sample back to the lab where he mounted it on a piece of wood and sanded it down with very fine sandpaper so he could count the rings. Oswald determined that red maple is about 150 years old, **placing its origin in the 1860's! That tree "remembers a time before the Civil War, a time when New Hampshire's population was only 326,000.**

Reading the rings gives us more than just a number. It tells us the story of the tree, giving us some insight about how the tree lived - almost like examining its memories. Groups of rings that are close together, then farther apart, show a change in rate of growth. When a tree is growing slowly, it tells us there are a lot of other trees around. That tree was competing with surrounding trees. All of the sudden, the rings show an acceleration of growth, showing less competition. Counting back the rings might line up with a hurricane that wiped out all the trees around it, or a logging expedition from which the tree was spared.

There's a lot of history to be found in trees. Spruce can live 400 years, Hemlock can live 600 years, and the oldest tree recorded was over 5,000 years old! Listen to the story at NHPR.org.

Lifted On Giant Inner Tubes, An Old Tree Moves In Michigan

By Tracy Samilton

October 26, 2014—For as many as 250 years, a bur oak has been growing on what is now the University of Michigan campus in Ann Arbor. The big tree stands in the way of an expansion of the Ross Business School. But instead of cutting it down, the **university is moving the tree. It's not easy, it's not cheap, and it's definitely not fast. As it was prepared for its 500-foot trip down a pedestrian mall, the old oak's 44-foot diameter root ball was wrapped in plastic and burlap and rested on long pipes, inserted earlier this summer to create a platform for lifting.** Read or listen to the whole story at www.nepr.net. And check out an update from this fall at www.mlive.com.



News

Worcester Combats Latest Beetle: Emerald Ash Borer

By Nick Kotsopoulos

December 14, 2015- Another invasive and destructive beetle has made its way into the city. The state Department of Conservation and Recreation (DCR) has confirmed the presence of the emerald ash borer beetle in Worcester, according to City Manager Edward M. Augustus Jr. He said the DCR last month found the beetle present in four ash trees in and around the Clarendon Street area. That includes a private property location and ash trees in the Crow Hill conservation area. Mr. Augustus said those four infested trees are currently the only finds in Worcester County. He said the DCR had already quarantined the entire state for emerald ash borer after infestations were found in Berkshire, Essex, and Suffolk counties. Mr. Augustus said the city Department of Public Works and Parks is working with the DCR and the U.S. Department of Agriculture for potential ways to minimize any further damage to the trees since there is no known way to eradicate this insect. "They will also work to determine the density of ash trees found within the city along with the status of this beetle," Mr. Augustus wrote in a preliminary report that goes before the City Council Tuesday night. The city is already dealing with the invasive Asian longhorned beetle, a scourge that has claimed more than 34,000 trees since it was first found here in 2008. Read the full story at the [Worcester Telegram](#).

Greater Tree Canopy Cover is Associated with Lower Rates of Both Violent and Property Crime in New Haven, CT

November 20, 2015, New Haven, CT—Crime is a persistent problem in many large and small urban areas. In new research, Kate Gilstad-Hayden and Spencer R. Meyer, Yale University, examine the effects of tree cover on crime. They find that for every 10% increase in tree canopy cover, there was a 15% decrease in the violent crime, and a 14% fall in the property crime rate. Trees, **according to the researchers, can help to increase 'eyes on the street' through recreational use, reduce mental fatigue which can lead to crime, and offer landscaping opportunities which act as a 'cue to care'.** Read the summary at [ACTrees](#) or read the original research note at [Landscape and Urban Planning](#).

Winter Moths Make Appearance for Mating Season

By Felicia Gans

November 30, 2015—**It's that time of year again** — the winter moths have arrived. And for some areas, researchers say the swarms will probably be thicker than **last year's. The winter moth is in the midst of its mating** season of late fall and early winter. Many of the insects appearing now are the same ones who chewed through **the leaves of New England's trees in the spring as caterpillars** and then burrowed into the soil to wait out the summer. The invasive European species, also known as the *Operophtera brumata*, has damaged trees from Long Island up into Maine. Scientists in the area are trying to understand how the species spreads — and how to control it.

Residents who have seen clouds of drab-colored moths flitting around this fall are likely seeing only a portion of the population. Only male winter moths fly; females **climb. "There's almost no tree they don't like,"** said Joseph Elkinton, a professor in the department of environmental conservation at the University of Massachusetts **Amherst. "It has an unbelievably wide host range."** Read the full story at [The Boston Globe](#).

Google Maps Unveils 10-Mile Digital Tour of Boston's Charles River

By Laura Newberry

December 10, 2016, Boston— Google Maps unveiled Thursday a never-before-seen virtual tour of the city's iconic Charles River. The Charles River Conservancy, an environmental nonprofit, spent two weeks in October documenting the 10-mile stretch between the Charles River Dam by the Museum of Science to the Watertown Dam. Learn more at [masslive.com](#).

Urban Trees Provide Pollution Solution

November 25, 2015—Urban environments Down Under aren't all that different than those in the United States. They also struggle with contaminated water running off and causing pollution. In response, cities often use natural landscapes of soil, grasses, and trees. These biofiltration systems capture and filter the runoff. How well do they filter runoff? Research on how soils and woody plants like trees filter water is lacking. In response, researchers at the University of Melbourne designed an experiment. Read the full story at [ScienceDaily](#).

On the Horizon

- Dec 31** **Deadline: Tree City USA, Tree Line USA, Tree Campus USA**
- Jan 6 EAB Symposium (invitation-only), Tower Hill Botanic Garden, Boylston, MA. To be put on the waiting list, contact Felicia.bakaj@state.ma.us
- Jan 7 Urban Forestry Today Webinar, 12:00 p.m. ET: www.joinwebinar.com and enter the code 130-408-251.
- Jan 12-13 MTWFA Annual Conference, Sturbridge, MA www.masstreekeepers.org
- Jan 13 Urban Forest Connections Webinar, <http://www.fs.fed.us/research/urban-webinars/>
- Jan 20 **i-Tree Webcast: What's New in i-Tree ECO**, <http://www.unri.org/itreeworkshops/>
- Jan 21 CTPA Annual Meeting, Plantsville, CT, <http://www.ctpa.org/>
- Feb 10 Urban Forest Connections Webinar, <http://www.fs.fed.us/research/urban-webinars/>
- Feb 17 i-Tree Webcast: HYDRO, <http://www.unri.org/itreeworkshops/>
- Feb 21-26 Municipal Forestry Institute, Shepherdstown, WV, www.urban-forestry.com/mfi-2016
- Feb 23 Mass. Arborists Association Annual Meeting, www.massarbor.org
- Mar 8 UMass Community Tree Conference, Amherst, MA, www.umassgreeninfo.org

- Mar 9 Urban Forest Connections Webinar, <http://www.fs.fed.us/research/urban-webinars/>
- Mar 9-10 ELA Conference and Eco Marketplace, Univ. of Mass., Amherst, MA, www.ecolandscaping.org
- March 10 Fall River Urban Forestry Workshop (more info coming soon.)
- Mar 16 i-Tree Webcast: DESIGN and CANOPY, <http://www.unri.org/itreeworkshops/>
- Mar 25 Deadline for NEC-ISA Arbor Day Grant, http://newenglandisa.org/arbor_day_grant
- Mar 29 MAA Safety Saves and Dinner Meeting, www.massarbor.org/
- Apr 1 Deadline: DCR Arbor Day Poster Contest, [2016 Arbor Day Poster Contest Instructions](http://2016.arbor.day.poster.contest.instructions)
- Apr 2 Mass Land Conservation Conference, Worcester, MA, <http://massland.org/conference>
- Apr 13 Urban Forest Connections Webinar, <http://www.fs.fed.us/research/urban-webinars/>
- Apr 20 i-Tree Webcast: STREETS, <http://www.unri.org/itreeworkshops/>
- Apr 22-24 [Northeast Natural History Conference](http://northeast.naturalhistoryconference.org), Springfield, MA
- Apr 29 Arbor Day in Massachusetts!

 **Tree City, Tree Line, and Tree Campus USA**
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Charles D. Baker, Governor

Karyn E. Polito, Lieutenant Governor

Matthew A. Beaton, Secretary, Executive Office of Energy and Environmental Affairs

Leo Roy, Commissioner, Department of Conservation and Recreation

Peter Church, Director of Forest Stewardship, Department of Conservation and Recreation

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If you have a topic you'd like to see covered or want to submit an item to *The Citizen Forester* (article, photo, event listing, etc.), please contact [Mollie Freilicher](mailto:Mollie.Freilicher@state.ma.us) or click [here](#).

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